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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,278	12/21/2001	Richard G. Mallinson	5820.617	2554

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EXAMINER	
MAYEKAR, KISHOR	

ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/033,278	MALLINSON ET AL.	
	Examiner	Art Unit	
	Kishor Mayekar	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,23-47 and 54-63* is/are pending in the application.

4a) Of the above claim(s) *1-15 and 23-31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-47 and 54-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/21/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-15 and 23-31, drawn to an apparatus for converting a gas stream, classified in class ~~142~~ 422, subclass 186+.

   II. Claim 32-47 and 54-63, drawn to a method for converting a gas stream, classified in class 204, subclass 165.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used in a process for the production of ozone.

3. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Attorney D. Sorocco on March 2, 2004 a provisional election was made without traverse to prosecute the invention of Group II, claims 32-47 and 54-63. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-15 and 23-31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 60 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 60 recites peroskites associated with a variable "x", however, the variable "x" is not defined therewith.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 60 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 60, the claim is indefinite for not defining the variable "x" in the perovskites.

In claim 61, the claim is indefinite for using the phrase "ZSM5".

Claim Rejections - 35 USC § 102 and § 103

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to. be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 32-38 are rejected under 35 U.S.C. 102(b) as being anticipated by MACLEAN (3,205,162), a reference cited by Applicant. MACLEAN's invention is directed to a process of conducting chemical reactions in a glow discharge. MACLEAN discloses in Figs. 1-2 and Examples II-IV that the process comprises all the steps as claimed wherein a spacing member is the chamber walls made of glass. MACLEAN also discloses in col. 2, lines that the process is for the reaction of oxygen and hydrocarbons to form carbonyl compounds and alcohols.

13. Claims 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over MACLEAN '162 in view of DUFOUR et al. (5,105,028). The difference between MACLEAN and the instant claims is the recited step of condensing the effluent. DUFOUR shows in a method of treating hydrocarbon gas by plasma process the

steps of separating the formed effluent by condensing (see col. 4, lines 26-32; Examples or Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified MACLEAN as shown by DUFOUR this would result in separating the formed effluents into various condensed products.

As to the subject matters of claims 43-44, it has been held that "making elements integral was held to have been obvious". In re Wolfe 116 USPQ 443.

As to the subject matter of claims 45-47, the selection of any of known equivalent condensing means would have been within the level of ordinary skill in the art.

14. Claims 32-38, 54 and 55 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by HAYASHI et al. (5,817,218), another reference cited by Applicant. HAYASHI's invention is directed to a plasma process for cracking or synthesizing gases. HAYASHI discloses that the process comprises all the steps as claimed (see abstract; Fig.1; col. 3, lines 4-9 and col. 7, lines 38-46).

15. Claims 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASHI '218 in view of DUFOUR '028. The difference between HAYASHI and the instant claims is the recited step of condensing the effluent. DUFOUR shows in a method of treating hydrocarbon gas by plasma process the steps of separating the formed effluent by condensing (see col. 4, lines 26-32; Examples or Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified HAYASHI as shown by DUFOUR this would result in separating the formed effluents into various condensed products.

As to the subject matters of claims 43-44, it has been held that "making elements integral was held to have been obvious". In re Wolfe 116 USPQ 443.

As to the subject matter of claims 45-47, the selection of any of known equivalent condensing means would have been within the level of ordinary skill in the art.

16. Claims 56-61 rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASHI '218 in view of YAMAMOTO (5,609,736) or BARLOW et al. (5,914,015). The difference between HAYASHI and the instant claims is the type of material

for the layer of the material. YAMAMOTO, another reference cited by Applicant, shows the use of metal oxides, zeolite in addition metal catalysts in a process for treating gas by a plasma process (col. 3, lines 24-33). BARLOW shows the same in a process for treating gas by a plasma process (col. 3, lines 61-66). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified HAYASHI as shown by either YAMAMOTO or BARLOW because the selection of any of known equivalent catalysts means would have been within the level of ordinary skill in the art.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. ~~RI~~TRISCHMANN et al. (3,992,277) shows the incorporation of means for condensing the effluent disposed within a housing (see Fig. 2).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kishor Mayekar
Primary Examiner
Art Unit 1753